

What is claimed is:

1. A wheel bearing device comprising:

an outer member formed with double-row outer races on

5 an inner periphery thereof;

an inner member formed with double-row inner races on
an outer periphery thereof, the inner member including a

wheel hub with a flange for attachment of a wheel and a
fitting member fitted to one of an inner periphery or an

10 outer periphery of the wheel hub, one of the wheel hub and

the fitting member that is located inside including a

plastically deformed portion radially expanded by plastic
deformation to be coupled with the other one of the wheel

hub and the fitting member that is located outside and an

15 adjacent part adjoining the plastically deformed portion

with a different inside diameter than that of the

plastically deformed portion;

double-row rolling elements interposed between the

outer races and the inner races; and

20 stress alleviating means for mitigating stress

concentration at an interface part between the plastically

deformed portion and the adjacent part of the one that is

located inside.

25 2. The wheel bearing device according to claim 1,

wherein the stress alleviating means is a specified ratio of an inside diameter Φd_2 of the adjacent part to an inside diameter Φd_1 of the plastically deformed portion after the plastic deformation, the ratio being 1.110 or 5 less.

3. The wheel bearing device according to claim 2, wherein the $\Phi d_2/\Phi d_1$ ratio is more than 1.

10 4. The wheel bearing device according to any one of claims 1 to 3, wherein the fitting member is an outer joint member of a constant velocity joint, the double-row inner races being formed on an outer periphery of the wheel hub and on an outer periphery of the outer joint member, 15 respectively.

5. The wheel bearing device according to any one of claims 1 to 3, wherein the fitting member is an inner ring fitted to an outer periphery of the wheel hub.

20 6. The wheel bearing device according to claim 5, wherein the double-row inner races are formed on an outer periphery of the wheel hub and on an outer periphery of the inner ring, respectively.

7. The wheel bearing device according to claim 5,
wherein the double-row inner races are formed on respective
outer peripheries of two inner rings fitted to the outer
periphery of the wheel hub.

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